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ABSTRACT

The paper addresses two significant risk management considerations in conducting an adventure program in a therapeutic setting: the potential hazards of psychiatric medications and psychological emergencies. Focusing on the potential hazards of psychiatric medications, the first section discusses climatic conditions (heat, cold, and sun) and the limitations of propranolol, phenothiazines, tricyclics, or antiparkinsonian medications on program activities. The symptoms of orthostatic hypotension, dystonia, akathisia, pseudo-parkinsonism, and tardive dyskinesia are discussed. The second section discusses two types of psychological emergencies: primary (symptoms are produced by emotional illness) and secondary (the behavior is a manifestation of a medical problem). Basic guidelines for properly labeling and managing a problem as either medical or psychological are outlined. These basic guidelines cover three steps: (1) assessment procedures--a mental status examination to assess cognitive functioning, indicators of emotional distress, and a symptom assessment; (2) intervention--observation, evacuation, interviews with individual, and outcome; and (3) evaluation of intervention--evacuation of individual and use of incident as a learning experience. (NQA)

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RISK MANAGEMENT IN ADVENTURE PROGRAMS WITH SPECIAL POPULATIONS: TWO HIDDEN DANGERS

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RISK MANAGEMENT IN ADVENTURE PROGRAMS WITH SPECIAL POPULATIONS: TWO HIDDEN DANGERS

The purpose of this paper is to address two significant risk management considerations in conducting an adventure program in a therapeutic setting. In the first section we will focus on the potential hazards of psychiatric medications and their limitations on program activities. In the second section we will address psychological emergencies and how to manage them from a practical standpoint.

MEDICATION OVERVIEW

For staff working in outdoor settings with people who are either physically debilitated (those with chronic diseases such as alcoholism, diabetes, or heart disease) or those who are taking prescribed medications for medical or psychiatric reasons, climatic conditions and potential medication side effects play a significant role in choosing the intensity and duration of program activities. The Outward Bound Mental Health Project, a collaborative between the Hurricane Island Outward Bound School and the Department of Psychiatry, Dartmouth Medical School, has been conducting Outward Bound sessions for mental health patients on a regular basis since 1975. Of those patients referred to the Project, a majority are using some form of psychoactive drug. A psychoactive drug is one that acts on the central nervous system. Psychoactive drugs do not cure mental illness, per se. They are used to relieve agitation and anxiety, as anti-depressants, and to control psychotic symptoms such as hallucinations and delusions. During the past seven years we have spent over 3,000 student program days in the outdoors with patients, some of whom are over 70 years of age and many of whom have accompanying medical problems. With the following considerations in mind, we have experienced no medication and/or medical problems in the field.

Climatic Considerations

The hypothalamus is the body's major center for thermoregulation. Body temperature is maintained within a narrow range despite extremes in physical activity and climatic conditions. Important factors in this regulation are fluid and caloric intake, vasoconstriction and vasodilation, thyroid functioning, excessive sedation and degree of physical activity. Certain psychoactive drugs may disrupt thermoregulation at hypothalamic as well as peripheral levels, leaving medicated individuals vulnerable to high or low environmental temperatures.[1,2]

a. Heat

The hypothalamus prevents overheating of the body by both increasing perspiration and by radiating heat from the body surface through peripheral vasodilation. Even with normal activity levels, heat stroke kills more than 4,000 people per year in the United States, with most death occurring coincidentally with increases in humidity.[3] Individuals at risk for heat morbidity are those who are predisposed by chronic diseases, fluid depletion, or those exposed to excessive thermal environments, either passively or through an increase in physical activity. Phenothiazine, tricyclic or antiparkinsonian drugs may decrease the body's ability to regulate temperature by inhibiting sweating. Therefore, patients under treatment with these medications require extra caution.

Drug induced heat stroke usually results in a sudden loss of consciousness, preceded by a brief period of confusion, and irrational behavior. The classic sign of heat stroke; i.e., the cessation of sweating may not be present.[4] A case report from the American College of Physicians, for instance, reviewed the death of a 21 year old psychiatric out-patient who was hospitalized in a coma with a temperature of 108°F following mild activity on a day when the average temperature was 87°F and the average relative

humidity was 19%. The patient's comatose condition developed quickly and was preceded only briefly by profuse perspiring and incoherent speech. The patient was on several medications which placed him at risk.

With the appropriate use of medication, and attention to thermoregulation and fluid intake we have had no such experiences. Also, during excessively hot weather, medications can be decreased slightly in anticipation of the experience with increased safety and no adverse clinical effects.

b. Cold

The hypothalamus conserves our body heat in adversely cold situations by stimulating adrenergic systems to produce a vasoconstriction in an effort to conserve heat and by initiating the shiver response that produces heat.

Propranolol, a drug used to treat high blood pressure, cardiac problems, and certain types of anxiety, can be particularly problematic in cold environments since it suppresses the body's adrenergic (mediated by adrenalin) response to the cold. Other sedative drugs can interfere with central hypothalamic cold regulation if used in sedating doses. Phenothiazines, tricyclics and antiparkinsonian medications can also decrease the body's response to the cold.

Side Effects of Medications

A. Orthostatic Hypotension: Orthostatic hypotension is a naturally occurring rapid change in blood pressure associated with changes in posture. A transition from lying down to standing up too quickly may cause an individual to experience a transient dizziness or faintness. This is caused by a drop in blood pressure that will temporarily decrease circulation to the brain. This phenomena is exacerbated by many psychoactive drugs, as well as by changes in fluid and caloric intake. This set of circumstances

must be understood well since one often sees a patient on medication (with or without a decrease in fluid or food intake) belaying on a ledge and then standing up too quickly and becoming dizzy, or standing up too quickly after a rest stop on a trail adjacent to a steep drop-off. Tricyclics, anti-parkinsonian and some anti-psychotic agents are particularly problematic, though usually only in the elderly and at the inception of therapy with the medication.

Extrapyramidal symptoms: Many anti-psychotic agents are able to induce a variety of involuntary disorders of movement.[5]

1. Dystonia: Patients on anti-psychotic medications occasionally develop dystonic reactions which usually occur within 4 or 5 days (can be sooner, particularly in younger patients) of initiating drug therapy. Difficulties are characterized by disordered muscle movement, bizarre posturing, or rigidity.

2. Akathisia: Can be experienced by 15% to as many as 45% of patients on anti-psychotic medications. Symptoms occur as an involuntary motor restlessness and are experienced as an inability to sit still and often accompanied by tremor. Akathisias are most commonly seen after several weeks of treatment and can occur in any age group.

3. Pseudo-Parkinsonism: A triad of akinesia (immobility), rigidity, and tremors (especially at rest), can cause some patients to appear as if they had Parkinson's disease.

4. Tardive Dyskinesia: This is a slowly developing neurological syndrome associated with long term anti-psychotic drug use. Clinical manifestations appear as repetitive involuntary movements of various muscle groups, particularly of the mouth, tongue and torso.

Extrapyramidal syndromes will often occur at the time that the patient is beginning medication, with a significant increase in medication

or as a slowly developing problem. Dystonia, Akathisia, and Pseudo-Parkinsonism can disappear spontaneously, or be treated by antiparkinsonian agents. These agents, however, increase the hazards of hypotension and heat stroke. Symptoms may significantly affect balance and agility. Rock climbing, ropes course, or any psychomotorically oriented activity might be extremely difficult to perform if extrapyramidal problems are not adequately treated. Therefore, activities should be chosen judiciously for those for whom treatment has been recently instituted. These patients may need to be closely monitored during activities that require balance and agility. Staff should always be in a position to assist the patient and, if elevated, lower them to the ground immediately.

c. Sun and Light Sensitivity: For the few patients (5%) on phenothiazine medications that may produce sun sensitivity, sun-screening agents should be provided. For those agents that might produce light sensitivity via pupilary dilation (phenothiazines, tricyclics, and anti-parkinson agents), sun glasses should be provided.

Recognition of the potential hazards from medications and weather is a key element in providing a safe therapeutic experience. From a practical standpoint, it is necessary to be familiar with all referred clients' medical histories, particularly for potentially limiting factors, secondary medical problems and medication issues.

PSYCHOLOGICAL EMERGENCIES

In psychological emergencies, as in medical emergencies, prompt treatment frequently decreases a potential problem's severity. Proper management of an individual reduces emotional distress significantly. There are two types of psychological emergencies: primary and secondary. In primary emergencies, emotional illness produces the symptoms. In secondary emergencies, the behavior is a manifestation of a medical problem.[6] Recognizing

the indicators of emotional or medical illness and properly labeling a problem as either medical or psychological is an important first step in dealing with the situation. Following these basic guidelines should be helpful to the Instructor who may be called upon to deal with such problems in the field.

Distinguishing between a medical and psychological problem can be done by performing a simple mental status examination. Disturbances of cognitive functioning (thinking processes) indicate a potential medical rather than psychological problem. Despite the stresses of a highly charged emotional environment, individuals should not lose their ability to perform simple calculations, or remember simple facts. Very often disorientation, confusion, and profound inability to remember simple facts is misattributed to psychological causes. For example, an acute cognitive impairment due to hypothermia or a toxic drug is frequently viewed incorrectly, as a psychological problem.

ASSESSMENT PROCEDURES

I. The Mental Status Examination: This is performed to quickly assess cognitive functioning:

   A. Orientation: An individual should be oriented as to person, place and time.

   B. Imprinting:

      1. An individual's short-term or recent memory should be intact. For example, one should be able to remember and repeat five objects after several minutes.
      2. An individual should be able to spell a simple word backwards,
      3. or, repeat an entire series of five numbers after they have been presented slowly with a pause between

each number.

C. Calculations: An individual should be able to perform simple calculations.

II. Emotional Distress: An important indicator of the onset of emotional distress is a gradual change in an individual's functioning:

A. Sleep pattern

1. The individual will not or cannot sleep, even when tired.
2. The individual needs an excessive amount of sleep.
3. The individual appears to be functioning in a sleep deprived state, unlike other members of the group.

B. Diet

1. Loss of normal food and fluid intake or appetite.
2. Loss of normal energy reserves.

C. Social Interactions

1. Overly intense
2. Unusually withdrawn

III. Symptom Assessment:

A. An individual may be subtly cognitively impaired, requiring a more formal assessment if:

1. He/she is unable to make a point.
2. Others are unable to follow his/her line of thought.
3. He/she has a short attention span; e.g. difficulty comprehending instructions.
4. He/she is talking very rapidly or is hyperactive in an atypical manner.
5. He/she has a perseverating preoccupation with an

emotion, an incident, or the environment.

B. If a cognitive impairment seems to be present, it strongly suggests a medical problem; the appropriate action is evacuation and medical evaluation. Let the experts determine the exact nature of the disorder and the ultimate disposition of an individual.

INTERVENTION

A. Keep the individual under observation and monitor his/her behavior.

B. Evacuate:

1. If the episodes of abnormal behavior are of increasing intensity, frequency, or duration.
2. After twelve hours of consistently abnormal behavior.

C. Interviewing the individual:

1. Be open-ended initially; e.g., "How are things going?"
2. Point out your observations; e.g., Are your observations consistent with the individual's perceptions?
3. There may be someone else in the group who has more rapport with the individual and is in a position to be more supportive.
4. Eliminate the audience unless otherwise indicated. Some attempt should be made to neutralize their anxiety.

D. Outcome:

1. If the individual responds favorably, continue your approach because what you are doing is apparently helpful.
2. If the individual responds unfavorably and becomes

worse, discontinue your approach and try something new.

3. If the individual is unresponsive, attempt to determine what the cognitive (internal: thoughts and feelings) or environmental (external: interpersonal) contingencies are that are causing the distress.
4. If the individual attempts to respond but cannot, or is non-compliant, an assessment must be made of cognitive functioning; e.g., Are they cognitively intact but angry? or are they impaired through some toxic or medical process?

E. If the problem is situational, the individual will most likely respond to the above. The Instructor can also try:
   1. Using the group as emotional support for the individual.
   2. Pairing the individual with a supportive figure.
   3. To re-design or re-conceptualize the experience to increase the likelihood of the individual re-labeling the experience as positive rather than negative.

EVALUATION OF INTERVENTION

A. Evacuate the individual if:
   1. The abnormal behavior continues or worsens despite all of the above attempts.
   2. His/her behavior absolutely dilutes the meaning of the experience for the rest of the group. The staff must not collude with the distorted thinking processes of a distressed participant at the expense of the other member's experience.

B. Leaving the course is a learning experience for everybody; it requires processing.

1. Use the group to debrief. This is a superb opportunity for personal growth on everybody's part.
2. The situation can be used by the staff as a therapeutic object lesson. That is, one can consolidate the learning and generalize from it.

SUMMARY

In conclusion, this paper has addressed two critical risk management issues in conducting an adventure program in a therapeutic environment. Recent advances in psychiatry, in particular, greater understanding of the biological basis of some psychiatric symptomatology suggests that more individuals will be taking some form of psychotropic medication as an adjunctive treatment for what are now understood to be complex biopsychosocial phenomena (a comprehensive or systems approach which goes beyond the traditional biomedical paradigm for understanding mental illness). For example, when the Food and Drug Administration (FDA) approved lithium in the early 1970s, its use as a mood stabilizer for manic-depressive patients became widspread. There are now millions of Americans taking prescribed doses of lithium for manic-depressive illness. Many of these individuals are social, community, or corporate leaders and lead healthy and productive lives. However, without this medication, many of these people would need frequent hospitalization or institutionalization.

Granted, there have been apparent abuses of medication, especially with institutionalized patients. There are patients who appear overly sedated or hyperactive adolescents who appear to be in some kind of stupor as a result of a particular medication. However, in terms of our experience, this is by no means necessary nor the usual situation, especially with those physicians trained in the recent advances in adjunctive pharmacotherapy.

As medical science advances it is clear that now, and in the future, wilderness therapy programs must take into account medications (psychiatric and medical) and their side effects when designing specific curricula intended to be therapeutic and safe. Psychological and medical emergencies which are bound to emerge in the field can be managed by the instructor by using common sense and following a coherent evaluation and intervention strategy. With the basic guidelines outlined in this paper, an instructor should be able to manage difficult situations in a professional and sensitive manner.

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